

**Notice of Allowability**

Application No.

09/822,713

Examiner

Dwin M. Craig

Applicant(s)

THURSTON, ANDREW J.

Art Unit

2123

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5-23-2005.
2. ☒ The allowed claim(s) is/are 1-5 and 7-45.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

**DETAILED ACTION**

**And**

**EXAMINER'S REASONS FOR ALLOWANCE**

1. **Claims 1-5 and 7-45** are allowed. Claim 6 is cancelled.

**Examiner's Reasons for Allowance**

2. The following is an examiner's statement of reasons for allowance:

- 2.1 As regards independent **claim 1**, the following limitations in combination with other limitations are neither anticipated nor made obvious by the prior art, *"wherein the one or more ASCII strings represent one or more mathematical operations in the serial circuit"* in combination with *"simulating the serial circuit to produce a plurality of parallel equations wherein simulating the serial circuit includes simulating the serial circuit for a plurality of cycles as required to produce one output represented by the plurality of parallel equations."* The Examiner has found this combination of limitations in view of Applicant's arguments on page 11 of the 5-23-2005 responses to be persuasive. The Examiner withdraws the earlier 35 USC § 103(a) rejections of claim 1 because the cited references fail to disclose using ASCII strings to represent a plurality of parallel equations.

- 2.2 As regards independent **claim 7**, the following limitations in combination with other limitations are neither anticipated nor made obvious by the prior art, *"producing one or more parallel equations in a hardware description language, wherein the producing comprises simulating a serial circuit"* in combination with *"merging the one or more parallel equations into a hardware description language implementation of a Galois Field circuit"*. The Examiner

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has found this combination of limitations in view of Applicant's arguments on page 12 of the 5-23-2005 responses to be persuasive. The Examiner withdraws the earlier 35 USC § 103(a) rejections of claim 7 because the combination of the cited references is not obvious in view of Applicant's arguments.

**2.3** As regards independent **claim 16**, the following limitations in combination with other limitations are neither anticipated nor made obvious by the prior art, *"means for implementing a serial circuit representing the complex polynomial equation in a software program"* in combination with *"means for storing one or more ASCII strings in each of one or more data structures"* and in further combination with *"means for simulating the serial circuit to produce a plurality of parallel equations"*. The Examiner notes that Applicant is invoking 35 USC § 112 sixth paragraph, *"means for"* language and that Applicants' specification provides the structural support for the implementing a serial circuit representing the complex polynomial equation in Figure 11 and pages 23 and 24. Further the Examiner notes that structural support for the means to store the ASCII strings is provided in Figure 10 and page 22 of the specification.

**2.4** As regards independent **claim 19**, the following limitations in combination with other limitations are neither anticipated nor made obvious by the prior art, *"means for implementing a serial circuit representing the complex polynomial equation in a software program"* in combination with *"means for merging the one or more parallel equations into a hardware description language implementation of a Galois Field circuit"*. The Examiner notes that Applicant is invoking 35 USC § 112 sixth paragraph, *"means for"* language and that Applicant's specification provides the structural support for implementing a serial circuit representing the complex polynomial equation in Figure 11 and pages 23 and 24. The Examiner notes that

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Applicant is invoking 35 USC § 112 sixth paragraph, “*means for*” language and that Applicant’s specification provides the structural support for a Galois Field circuit on page 24.

**2.5** As regards independent **claim 26**, the following limitations in combination with other limitations are neither anticipated nor made obvious by the prior art, “*An apparatus for performing Galois Field decoding*” in combination with “*the one or more parallel equations are generated by simulating a serial circuit; and a receive demultiplexer coupled to the FEC decoder, the receive demultiplexer for demultiplexing the SONET signal into a plurality of SONET datastreams*”. The Examiner has found this combination of limitations in view of Applicant’s arguments on page 15 of the 5-23-2005 responses to be persuasive. The Examiner withdraws the earlier 35 USC § 103(a) rejections of claim 26 because the combination of the cited references is not obvious in view of Applicant’s arguments.

**2.6** As regards independent **claim 36**, the following limitations in combination with other limitations are neither anticipated nor made obvious by the prior art, “*An apparatus for performing Galois field encoding comprising*” in combination with “*the FEC encoder comprises a first circuit that implements one or more parallel equations, and the one or more parallel equations are generated by simulating a serial circuit;*” The Examiner has found this combination of limitations in view of Applicant’s arguments on page 15 of the 5-23-2005 responses to be persuasive. The Examiner withdraws the earlier 35 USC § 103(a) rejections of claim 36 because the combination of the cited references is not obvious in view of Applicant’s arguments.

**2.8** As regards dependent claims 2-5, 8-15, 17, 18, 20-25, 27-35 and 37-45 they are allowed as they depend upon an allowed base claim.

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2.9 Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

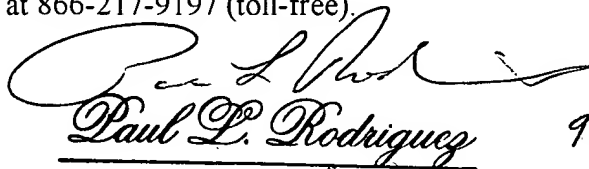
Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwin M. Craig whose telephone number is (571) 272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMC

  
Paul L. Rodriguez 9/1/05  
Primary Examiner  
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